

November 14, 2006

MEMORANDUM TO: Chairman Klein  
Commissioner McGaffigan  
Commissioner Merrifield  
Commissioner Jaczko  
Commissioner Lyons

FROM: Luis A. Reyes */RA/*  
Executive Director for Operations

SUBJECT: COMPLETION OF DECOMMISSIONING AT THE KAISER ALUMINUM FACILITY AND CONSULTATION WITH THE U.S. ENVIRONMENTAL PROTECTION AGENCY UNDER THE U.S. NUCLEAR REGULATORY COMMISSION/U.S. ENVIRONMENTAL PROTECTION AGENCY MEMORANDUM OF UNDERSTANDING

On October 9, 2002, the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Environmental Protection Agency (EPA) entered into a Memorandum of Understanding (MOU) entitled, "Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites." The MOU provides that, unless an NRC-licensed site exceeds any of three trigger criteria contained in the MOU, EPA agrees to defer to NRC the decision-making for decommissioning without the need for consultation.

In SECY 03-0112, "Site Specific Consultation Under the 2002 Memorandum of Understanding Between the U.S. Nuclear Regulatory Commission and the U.S. Environmental Protection Agency" (ML0313604630), dated July 7, 2003, the staff established a process for complying with the MOU. Per this process, for sites with residual radioactivity that exceed the criteria in the MOU, NRC will consult with EPA at two points in the decommissioning process: (Level 1) before NRC's approval of the license termination plan or decommissioning plan (DP); and (Level 2) after completion of the final status survey (FSS).

NRC's process for consulting with EPA calls for Level 1 consultations to occur early in the decommissioning process. However, NRC has several sites that are in the latter stages of decommissioning. Because these sites are further along in the decommissioning process, the appropriate opportunity for consultation with EPA, should it be required, is the Level 2 consultation that follows the completion of the FSS.

On October 27, 2004, NRC informed EPA that the Kaiser Aluminum and Chemical Corporation (Kaiser) site in Tulsa, Oklahoma, was a site that may require a Level 2 consultation. Because the site already had an approved DP, there had been no opportunity for a Level 1 consultation.

CONTACT: John T. Buckley, FSME/DWMEP  
(301) 415-6607

Kaiser has completed decommissioning activities at its Tulsa, Oklahoma site. Because Kaiser is not a licensee, Kaiser was not obligated to meet the criteria of the License Termination Rule (LTR) in 10 CFR 20, Subpart E. However, Kaiser agreed to decommission the site in accordance with the dose-based LTR criteria, which are fully protective of the public health and safety.

Staff has completed its review of the Kaiser FSS, and has verified that some soil remaining on-site, at 10 feet or more below the surface of the site, has thorium concentrations up to 31 picocuries per gram (pCi/g), exceeding the MOU soil value of 5 pCi/g. The soil containing residual radioactivity is overlain by a minimum of 10 feet of clean soil containing Th-232 at concentrations that do not exceed environmental background levels. The estimated post-decommissioning dose to the average member of the critical group from all relevant pathways, assuming a resident farmer scenario, is less than 2 millirem per year. Because Kaiser has completed all decommissioning activities described in the approved DP and the site meets NRC criteria for unrestricted use, the staff finds that Kaiser has discharged all of its obligations with respect to the decommissioning of its Tulsa, Oklahoma site.

To fulfill its obligations under the MOU, the staff has prepared a letter to inform EPA of NRC's conclusions about the site (Enclosure 1) and in accordance with SRM-SECY-03-0206, "Implementation of Site-Specific Consultation Under the 2002 Memorandum of Understanding Between the USNRC and the USEPA" (ML040430439) is forwarding the letter to the Commission for consultation. Staff has also prepared a letter to inform Kaiser of staff's conclusions about the site and to establish contact with EPA per the MOU (Enclosure 2). Kaiser was previously told about the need for a Level 2 consultation.

Unless directed otherwise by the Commission, staff will send the enclosed Level 2 consultation letter to EPA on November 27, 2006. If requested, staff can brief the Commissioner's Technical Assistants to provide additional background information on the Kaiser site.

Kaiser is the third Level 2 consultation conducted since the staff received SRM-SECY 03-0206. Previous consultations for the Cabot and Kerr McGee Cushing sites resulted in no significant issues raised by either the EPA or the Commission that altered NRC actions in these cases. Accordingly, staff believes this process has become routine and requests approval to process future Level 2 consultations without prior Commission approval. The staff proposes to inform the Commission coincident with future EPA consultations.

SECY, please track.

Enclosures:

1. Letter to EPA
2. Letter to Kaiser

cc: SECY  
OGC  
OCA  
OPA  
CFO

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SECY, please track.

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cc: SECY OGC OCA OPA CFO

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Barnes Johnson, Acting Director  
Office of Superfund Remediation  
and Technology Innovation  
U.S. Environmental Protection Agency  
M.S. 5210G  
1200 Pennsylvania Avenue, NW  
Washington DC 20460

SUBJECT: DECOMMISSIONING OF THE KAISER ALUMINUM AND CHEMICAL  
CORPORATION SITE IN TULSA, OKLAHOMA

Dear Mr. Johnson:

This letter is to notify you of the decommissioning oversight actions that the U.S. Nuclear Regulatory Commission (NRC) has taken, and intends to take, for the Kaiser Aluminum and Chemical Corporation (Kaiser) site in Tulsa, Oklahoma.

On October 9, 2002, NRC and the U.S. Environmental Protection Agency (EPA) entered into a Memorandum of Understanding (MOU) titled, "Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites." The MOU provides that, unless an NRC-licensed site exceeds any of three trigger criteria contained in the MOU, EPA agrees to defer to NRC the decision-making for decommissioning without the need for consultation.

For sites with residual radioactivity that trigger the MOU criteria, NRC consults with EPA at two points in the decommissioning process depending on the nature of the residual radioactivity at that point: (Level 1) before NRC's approval of the license termination plan (LTP) or decommissioning plan (DP); and (Level 2) after completion of the final status survey (FSS). NRC's process for consulting with EPA calls for Level 1 consultations to occur early in the decommissioning process; however, NRC has several sites which are in the latter stages of decommissioning. Because these sites are further along in the decommissioning process, the next opportunity to consult with EPA is after the completion of the FSS (Level 2 consultation).

On October 27, 2004, NRC informed EPA that the Kaiser facility had an approved DP that included radionuclide concentrations for soil that exceeded the values in the MOU for Thorium-232 (Th-232) and Radium-226. EPA responded to this letter on December 21, 2004, and on February 23, 2005, NRC committed to additional consultation with EPA to resolve any remaining issues, if, following remediation activities, remaining levels of residual radioactivity exceed the MOU values.

This letter is to notify you that the Kaiser site requires a Level 2 consultation because post-remediation residual radioactivity levels exceed the 5 picocuries per gram (pCi/g) MOU criteria for thorium in soil. The NRC staff has completed its review of the Kaiser FSS, and has verified that Kaiser met the decommissioning criteria specified in the approved DP, and that some soil remaining on-site at depths greater than 10 feet below the surface, has thorium concentrations

up to 31 pCi/g. The soil containing residual radioactivity above the MOU criteria is overlain by a minimum of 10 feet of clean soil containing thorium at concentrations that do not exceed environmental background levels. Concentrations of Ra-226 do not exceed the MOU values and radionuclide concentrations in groundwater at the site do not exceed the MOU criteria. Because Kaiser is not a licensee, Kaiser was not obligated to meet the criteria of the License Termination Rule (LTR) in 10 CFR 20, Subpart E. However, Kaiser agreed to remediate the site in accordance with the LTR criteria, which are fully protective of the public health and safety. The estimated dose from remaining residual radioactivity at Kaiser, assuming a resident farmer scenario, is less than 2 millirem per year.

As part of the DP review and approval process, the NRC staff prepared, and issued for public comment, environmental assessments (EAs) to document how remediation at the Kaiser site would ensure protection of the public health and safety, and the environment. The EA for the first phase was published in the *Federal Register* on March 8, 2000, at 65 FR 12283, and the EA for the second phase was published in the *Federal Register* on June 9, 2003, at 68 FR 34422. The EAs concluded that remediation activities would not result in any significant impacts on the human environment and are protective of human health. Approval of the DPs was based on the NRC staff's Safety Evaluation Reports (SERs) issued on April 4, 2000 (Phase 1) (ML003715786), and June 8, 2003 (Phase 2) (ML031620343). The SERs concluded that the activities described in the DPs were consistent with NRC regulations and that remediation activities would not be inimical to the common defense and security, or to the health and safety of the public.

Kaiser has completed all decommissioning activities described in the approved DPs, and the site meets the NRC's criteria for unrestricted use, based on an analysis of potential doses to the public from residual radioactivity at the site. As such, the NRC finds that Kaiser has discharged all of its obligations to the NRC with respect to the decommissioning of its Tulsa, Oklahoma site. In accordance with 10 CFR 20.1401(c), NRC will not require Kaiser to perform additional decommissioning activities at the site, unless new information demonstrates that the criteria were not met and residual radioactivity at the site could result in a significant threat to public health and safety.

If EPA believes that unresolved issues remain regarding the Kaiser site, please contact Keith McConnell, Deputy Director, Decommissioning & Uranium Recovery Licensing Directorate, at 301-415-7295, to establish the time frame and conditions for a Level 2 consultation. NRC intends to finalize its activities by December 18, 2006. Please contact NRC as soon as possible if any issues remain to be resolved regarding this site.

Sincerely,

Charles L. Miller, Director  
Office of Federal and State Materials  
and Environmental Management Programs

Mr. Bill Vinzant  
Project Manager  
Kaiser Aluminum & Chemical Corporation  
9141 Interline Avenue, Suite 1A  
Baton Rouge, LA 70809

SUBJECT: COMPLETION OF DECOMMISSIONING ACTIVITIES AT KAISER ALUMINUM  
AND CHEMICAL CORPORATION (KAISER) SITE IN TULSA, OKLAHOMA

Dear Mr. Vinzant:

On September 14, 2006, Kaiser notified the U.S. Nuclear Regulatory Commission (NRC) that it had completed decommissioning and final status surveys (FSSs) for Kaiser's Tulsa, Oklahoma Site, in accordance with its approved decommissioning plan (DP). The NRC staff has completed the review of the FSS Reports (FSSRs) and concludes, in accordance with 10 CFR 40.42(k), that: (1) source material has been properly disposed; (2) reasonable effort has been made to eliminate residual radioactive contamination; (3) submitted FSSRs and associated documentation, demonstrate that the facility and site are suitable for release in accordance with the criteria for decommissioning in 10 CFR Part 20, Subpart E; and (4) records required by 10 CFR 40.61(d) and (f) have been received. Therefore, the staff concludes that Kaiser has completed all decommissioning activities described in the approved DP for the site, and the site meets the NRC's criteria for unrestricted use based on an all-pathways analysis of potential doses to the public from residual radioactivity at the site.

Accordingly, the NRC finds that Kaiser has discharged all of its obligations to the NRC with respect to the decommissioning of its Tulsa, Oklahoma site. In accordance with 10 CFR 20.1401(c), NRC will not require Kaiser to perform additional decommissioning activities at the site unless new information demonstrates that the criteria were not met and residual radioactivity at the site could result in a significant threat to public health and safety.

On October 9, 2002, the NRC and the U.S. Environmental Protection Agency (EPA) entered into a Memorandum of Understanding (MOU) titled, "Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites." The MOU provides that, unless an NRC-licensed site exceeds any of three trigger criteria contained in the MOU, EPA agrees to defer to NRC the decision-making on decommissioning without the need for consultation. For sites with residual radioactivity that trigger the criteria in the MOU, NRC will consult with EPA at two points in the decommissioning process: (Level 1) before NRC's approval of the license termination plan (LTP) or decommissioning plan (DP); and (Level 2) after completion of the FSS.

On October 27, 2004, NRC informed EPA that the Kaiser site has an approved DP that includes radionuclide concentrations for soil that exceed the values in the MOU for Thorium-232 (Th-232) and Radium-226. NRC committed to additional consultation with EPA to resolve any remaining issues, if, following remediation activities, remaining levels of residual radioactivity exceeded MOU values. Staff has reviewed the Kaiser FSSR, and has verified that some soil

remaining on-site, at 10 feet or more below the surface of the site, has thorium concentrations up to 31 picocuries per gram (pCi/g), exceeding the MOU soil value of 5 pCi/g. However, concentrations of Ra-226 do not exceed the MOU values and radionuclide concentrations in groundwater at the site do not exceed the MOU criteria. NRC has informed EPA of the as-left condition of the Kaiser site and has requested that EPA identify any unresolved issues regarding the site. If EPA identifies any unresolved issues associated with the Kaiser site, NRC will contact you. However, as stated above, Kaiser has discharged all of its obligations to the NRC with respect to the decommissioning of its Tulsa, Oklahoma site and NRC will not require Kaiser to perform additional decommissioning activities at the site, unless new information demonstrates that the criteria were not met and residual radioactivity at the site could result in a significant threat to public health and safety.

The staff's review of the FSSRs is documented in Enclosure 1: Safety Evaluation Report. Enclosure 2 is the Notice of Completion of Decommissioning which is being sent to the Office of the Federal Register for publication.

In accordance with NRC's regulations at 10 CFR 2.390, "Rules of General Applicability," a copy of this letter will be available electronically in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions please contact John Buckley at (301) 415-6607.

Sincerely,

Keith I. McConnell, Deputy Director  
Decommissioning & Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

Enclosures:

1. Safety Evaluation Report
2. *Federal Register* Notice

Docket No.: 040-2377

License No.: STB-472

cc: Kaiser Aluminum Service list